

WHAT IS CLAIMED:

1. A method for curing a UV curable clearcoat composition, said method comprising:

providing an article;

5 applying a UV curable clearcoat composition to the article;

exposing the UV curable clearcoat composition to a first light source having a first average light intensity for a first period of time which is sufficient to cure a first portion of the UV curable clearcoat composition; and
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exposing the UV curable clearcoat composition to a second light source having a second average light intensity less than the first average intensity for a second period of time which is sufficient to cure a second portion of the UV curable clearcoat composition, the first and second portions forming a substantially cured clearcoat.
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2. The method of claim 2 wherein the first portion comprises 5 to 25 percent of the UV curable clearcoat composition and the second portion comprises the remainder of the UV curable clearcoat composition.
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3. The method of claim 2 wherein the first portion is above the second portion.

4. The method of claim 1 wherein the first source comprises a xenon flash lamp.

25 5. The method of claim 4 wherein the second source comprises a fluorescent diffuse lighting source.

6. The method of claim 1 wherein the amount of energy required to cure the first portion comprises 75-300 J/m² at 320 nm.

5 7. The method of claim 1 wherein the amount of energy required to cure the second portion comprises 50-100 J/m² at 380 nm.

8. The method of claim 2 wherein the first portion require at least 50% of the total energy required to cure the entire clearcoat composition.

10 9. The method of claim 1 wherein the first period of time comprises 15-45 seconds.

10. The method of claim 1 wherein the second period of time comprises 10-20 minutes.

15 11. The method of claim 9 wherein the first average intensity comprises 0.1-100 W/m² at 260-400 nm at a distance of 15 cm.

12. The method of claim 1 wherein the second intensity comprises 0.01-1.0 W/m² at 300-400 nm at a distance of 15 cm.

20 13. The method of claim 11 wherein the first light source is a discontinuous light source.

14. The method of claim 13 wherein the first light source is delivered in spaced apart flashes of light.

25 15. A method for curing a UV curable clearcoat composition, said method comprising:

providing an article;
applying a UV curable clearcoat composition to the
article;

5 exposing the UV curable clearcoat composition to a
first light source supplying 75-300 J/m² at 320 nm of energy
to cure a first portion of the UV curable clearcoat
composition; and

10 exposing the UV curable clearcoat composition to a
second light source supplying 50-100 J/m² at 380 nm of
energy to cure a second portion of the UV curable clearcoat
composition, the first and second portions forming a
substantially cured clearcoat.

15 16. The method of claim 15 wherein the first
portion comprises 5 to 25 percent of the UV curable
clearcoat composition, the second portion comprises the
remainder of the UV curable clearcoat composition, with the
first portion being above the second portion.

17. The method of claim 15 wherein the first
source comprises a xenon flash lamp.

20 18. The method of claim 17 wherein the second
source comprises a fluorescent diffuse lighting source.

19. A system for curing a UV curable clearcoat
composition on an article, said system comprising:

25 a spray unit for applying a UV curable clearcoat
composition to the article;

a first light unit for exposing the UV curable
clearcoat composition to a first average light source having
a first average light intensity for a first period of time
which is sufficient to cure a first portion of the UV
30 curable clearcoat composition;

a second light unit for exposing the UV curable clearcoat composition to a second light source having a second average light intensity less than the first average intensity for a second period of time which is sufficient to cure a second portion of the UV curable clearcoat composition, the first and second portions forming a substantially cured clearcoat; and

transport unit for transporting the article through the spray unit, the first light unit, and the second light unit.

20. The system of claim 19 wherein the first source comprises a xenon flash lamp, and the second source comprises a flourescent difuse lighting source.